

Customer No.: 31561  
Application No: 10/710,786  
Docket No.: 11577-US-PA

### **REMARKS**

#### **Present Status of the Application**

Claim 1-8 are rejected. Specifically, claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Chiyokubo (JP Pub. 10-124816). Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (U. S. Patent 6,602,775; Hereinafter Chen) or under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Chiyokubo. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Chiyokubo and further in view of Lei et al. (U. S. Patent 6,784,089; Hereinafter Lei). Applicant has amended claim 1 and 6. After entry of amendments, claims 1-8 remain pending in the present application, and reconsideration of those claims is respectfully requested.

#### **Discussion of Office Action Rejections**

Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Chiyokubo. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, or under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Chiyokubo. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Chiyokubo and further in view of Lei. Applicant respectfully traverses the rejections for at least the reasons set forth below.

1. In the present invention, as for example shown in FIG. 2C, the metallic layer 204 is on the bonding pad 202. However, the exposed surface of the material layer, such as the passivation layer 206 is not a smooth flat surface. In order to allow the photoresist to be

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adhered to the passivation layer 206, two photoresist layers 209 and 210 are formed over the substrate 200. In other words, the passivation layer has an exposed portion around the metallic layer 204. Due to the exposed portion of the passivation layer, it has the conventional issues about formation of electric bridge ([0011]). However, the present invention uses the two-layer photoresist and can at least reduce the electric bridge.

2. In re Chiyokubo, the first photoresist layer 17 and the second photoresist layer 16b are formed on the conductive film 18 *without on the photoresist layer 16a*. The conductive layer 18 is between the photoresist layer 16a and the photoresist layer 16b.

Further, there is no consideration on electric bridge in Chiyokubo, so as to effectively avoid the occurrence of electric bridge in the present invention.

Therefore, amended independent claims 1 and 6 are distinguishable over Chiyokubo.

3. In re Chen (see Fig 1), the metallic layer 16 is formed over the passivation layer 14 and over the exposed portion of the pad metal portion 12 (col. 2, lines 43-45). In other words, the metallic layer 16 fully covers the passivation layer 14 without exposing the passivation layer 14. Then, the photoresist layer 18 is formed on the metallic layer 16 by spin. Since the metallic layer 16 does not expose the passivation layer 14. Apparently, photoresist layer 18 is not formed on the passivation layer 14. The issue of electric bridge, occurring on the passivation layer, is not considered in Chen.

Therefore, Chen does not disclose at least the features as recited in claims 1 and 6. Chen

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even does not consider at least the issue of electric bridge on the passivation layer. Independent claims 1 and 6 are distinguishable over Chen. The dependent claims 2-4 and 7-8 are distinguishable over Chen, too.

4. Even if Chen and Chiyokubo are in combination, the features as recited in independent claims 1 and 6 are not equally disclosed. The dependent claims 2-4 and 7-8 are distinguishable over Chen, too.

5. With respect to claim 5, for at least the same reasons applied to claim 1, Chen and Chiyokubo failed to disclose the features as discussed above about forming the photoresist layer on the passivation layer around the metallic layer.

Lei is cited by the Office Action in further combination about forming the bump with electroplating. However, Lei still does not disclose the features missing in Chen and Chiyokubo. Claim 5 is therefore distinguishable over the prior art references.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1 and 6 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claims 2-5 and 7-8 patently define over the prior art references as well.

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**CONCLUSION**

For at least the foregoing reasons, it is believed that all the pending claims 1-8 of the invention patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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